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Title: ADJUSTABLE TIMING CIRCUIT OF AN INTEGRATED CIRCUIT

REMARKS

By this amendment, Applicant has amended claims 1, 6, 9, and 13 to clarify the claim language in response to the 112 objections in the Office Action. Applicant has amended claims 26, 27, 29, and 30 in response to the Office Action's indication of informalities, while maintaining that the claims were clear in unamended form. Applicant has amended claims 25-30 to recite them in independent form so as to be allowable as indicated in the Office Action, has amended claims 16-18 to depend from claim 25, and has amended claims 20-21 to depend from claim 28. New claims 31-40 depend from allowable claims 26, 27, 29, or 30, do not add new subject matter or require new search, and are also believed allowable. Claims 1-14, 16-18, and 20-40 remain for consideration in the application.

Claim Objections

Claims 15, 19, 26-27 and 29-30 were objected to due to the following alleged informalities: all instances of "edge" or "edges" should read "signal edge" or "signal edges" for clarity. Applicant has canceled claims 15 and 19 and amended claims 26-27 and 29-30 to address the Examiner's objection. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection.

Rejections Under 35 U.S.C. § 112

Claims 1, 6, 9 and 13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, Claims 1 and 9 were rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. Applicant has amended claims 1 and 9 to more clearly recite the relationships between terms, but submits that a reading of the specification makes it clear to one of ordinary skill in the art the relationships between the edges.

Specifically, claims 6 and 13 were rejected under 35 U.S.C. § 112, second paragraph, alleging that the term "certain number" was indefinite. Applicant has

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amended claims 6 and 13 to recite a "predetermined" number. Such a number is described and discussed in the specification, and as such is definite and is not new matter.

Rejections Under 35 U.S.C. § 102

Claims 1, 3, 5, 9, 11-12 and 15-17 were rejected under 35 U.S.C. § 102 (b) as being anticipated by Churchill et al. (U.S. Patent 5,936,977). Applicant respectfully traverses. As recited, claims 1 and 9 include a delay element for adjusting an edge position of one signal relative to other edges of the signal, a number of edge positions relative to other edges of the signal, or the duration of a single signal relative to other signals. There is no mention whatsoever in Churchill et al. of any adjustment other than a pulse width adjustment. There is no mention of adjustment of edge position with respect to other edge positions, or of the adjustment of multiple edge positions, as is recited in claims 1 and 9. In fact, the parts of Churchill et al. that are noted by the Office Action, specifically, column 3, lines 59-61 and column 12, lines 65-67, are clearly directed only to adjustment of pulse width and not to edge adjustment as recited in claims 1 and 9.

Rejections Under 35 U.S.C. § 103

Claims 2, 4, 10 and 18-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Churchill et al. in view of Bishop et al. (U.S. Patent 6,219,813). Claims 2, 4, and 10 depend from and further define patentably distinct claim 1 or 9, and are believed allowable. Claims 18 and 20-21 have been amended to depend from allowable claims. Claim 19 has been canceled. Claim 22 recites programming a plurality of non-volatile fuses, testing, and then reprogramming the plurality of non-volatile fuses. In contrast, Churchill et al. recites loading scan data in a scan register, and later programming a delay circuit. No reprogramming is disclosed or taught. Claim 22 is believed allowable. Claims 23-24 depend from and further define patentably distinct claim 22, and are also believed allowable.

Claims 6-8 and 13-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Churchill et al. in view of Bishop et al. and in further view of Hunter, et al. (U.S. Patent 6,067,648). Claims 6 and 13 each recite "a plurality of set/reset flip-flops triggered off of a signal edge or a predetermined number of delay elements and reset by other edges or numbers of delay elements." The combination of Churchill et al.,

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Bishop et al., and Hunter et al. does not discuss, nor does the Office Action state where they discuss or teach, either alone or in combination, the recited elements. triggered and reset in the same way as the triggering and reset of the present claims. In fact, the only triggering is discussed as on a clock edge, and the only reset is an automatic reset "at the completion of a programmed asynchronous delay." (Hunter et al., col. 28, lines 56-57). As such, not all of the elements of claims 6 and 13 are present in the combination of references, and claims 6 and 13 are allowable. Claims 7-8 and 14 depend from and further define patentably distinct claims 6 or 13 and are also believed allowable.

Allowable Subject Matter

The Examiner indicated Claims 25-30 were allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Applicant has amended the claims as suggested. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection, and allowance of claims 25-30. Further, claims 16-18 and 20-21, as well as new claims 31-40, depend from one of allowable claims 25-30 and are also believed allowable.

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CONCLUSION

Applicant believes that the claims are in condition for allowance and respectfully request a withdrawal of the Final Rejection and a Notice of Allowance be issued in this case. If the Examiner has any questions regarding this application, please contact the under-signed at (612) 312-2200. No new matter has been added and no additional fee is required by this amendment and response.

Respectfully submitted,

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